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pJNC-COsp-opCLII	
Cat. No.	P-106
Gene/Insert name:	Cytochrome *c* oxidase signal peptide sequence −Codon-optimized Clytin II
Vector backbone:	pCMV-JNC
Vector type:	Mammalian cells
Backbone size w/o insert (bp):	5,363
Bacterial resistance:	Ampicillin and neomycin
Growth strain:	JM83
Growth temperature (°C):	37
Growth instructions:	pJNC-COsp-opCLII is resistant to ampicillin and neomycin
High or low copy:	High copy
Vector map:	pJNC-COsp-opCLII
Coding sequence:	Nucleotide sequence & Amino acid sequence
Plasmid sequence:	pJNC-COsp-opCLII (6,044 bp)
Restriction enzyme list:	Restriction enzyme sites of pJNC-COsp-opCLII
GenBank Accession No.:	opCLII: HJ241347
Size:	10 µg
Constituents:	10 mM Tris-HCl (pH 7.6)－1 mM EDTA
Terms and Licenses:	MTA
Laboratory Reagent For Research Use Only	

コスモ・バイオ株式会社

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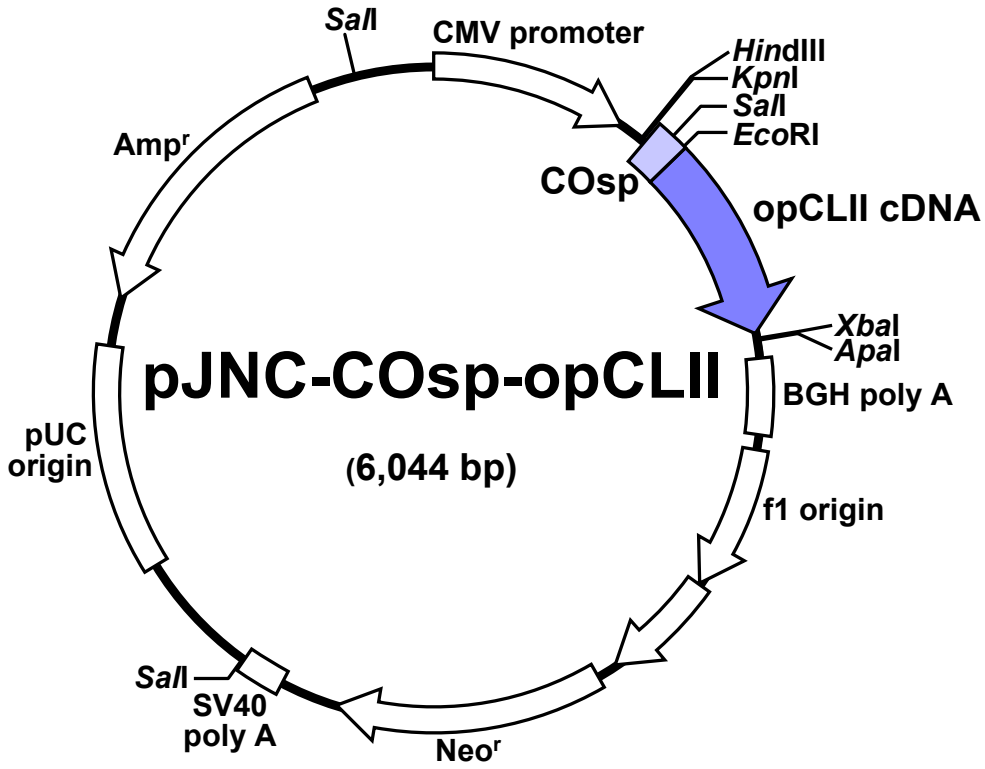
Mammalian expression vector: Ca^{2+}-Binding Photoprotein, Clytin II, with Mitochondria-Targeting Sequence

Cat. No. P-106

Name: pJNC-COsp-opCLII
Insert: Cytochrome *c* oxidase signal peptide sequence (COsp) −Codon-optimized Clytin II (opCLII) cDNAs
Vector: pCMV-JNC



- **Feature for pJNC-COsp-opCLII:**

Residue	Sourse	Comments
1-669	1-669	pCMV-JNC backbone
1-588	1-588	CMV promoter
632-651	632-651	T7 promoter
673-747	1-75	COX signal peptide sequence
769-1,335	97-663	Codon-optimized Clytin II ORF
1,340-6,044	741-5,445	pCMV-JNC backbone
1,367-1,384	768-785	Sp6 promoter
1,410-1,634	811-1,035	BGH polyadenylation sequence
1,680-2,108	1,081-1,509	f1 origin
2,113-2,456	1,514-1,857	SV40 early promoter and origin
2,518-3,312	1,919-2,713	Neomycin resistance gene (ORF)
3,486-3,616	2,887-3,017	SV40 early polyadenylation signal
3,999-4,672	3,400-4,073	pUC origin
4,817-5,677	4,218-5,078	Ampicillin resistance gene (ORF)

Ref.

1) Clytin II amino acid seq. & cDNA seq.: GenBank Accession No. AB360785
Inouye, S. *J. Biochem.* (2008) 143: 711-717.

2) Codon-optimized Clytin II DNA seq.: GenBank Accession No. HJ241347
Inouye, S. *et al*. *Protein Expr. Purif.* (2015) 109: 47-54

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Gene coding region (ORF: Cytochrome *c* oxidase signal peptide sequence/ COsp−Codon-optimized Clytin II/opCLII)

Nucleotide sequence

AAGCTTGGTACCACC**ATG**TCCGTCCTGACGCCGCTGCTGCTGCGGGGCTTGACAGGCTCGGCCCGTCGAC
TCCCAGTGCCGCGCGCCAAGATCCATTCGTTGCCGGAATTCGTGAAGCTGGACCCCGACTTCGCCAACCC
CAAGTGGATCAACAGACACAAGTTCATGTTCAACTTCCTGGACATCAACGGCAACGGCAAGATCACCCTG
GACGAGATCGTGAGCAAGGCCAGCGACGACATCTGCGCCAAGCTGGACGCCACCCCCGAGCAGACCAAGA
GACACCAGGACGCCGTGGAGGCCTTCTTCAAGAAGATGGGCATGGACTACGGCAAGGAGGTGGCCTTCCC
CGAGTTCATCAAGGGCTGGGAGGAGCTGGCCGAGCACGACCTGGAGCTGTGGAGCCAGAACAAGAGCACC
CTGATCAGAGAGTGGGGCGACGCCGTGTTCGACATCTTCGACAAGGACGCCAGCGGCAGCATCAGCCTGG
ACGAGTGGAAGGCCTACGGCAGAATCAGCGGCATCTGCCCCAGCGACGAGGACGCCGAGAAGACCTTCAA
GCACTGCGACCTGGACAACAGCGGCAAGCTGGACGTGGACGAGATGACCAGACAGCACCTGGGCTTCTGG
TACACCCTGGACCCCACCAGCGACGGCCTGTACGGCAACTTCGTCCCC**TAA**GTCGAGCATGCATCTAGA

Amino acid sequence

MSVLTPLLLRGLTGSARRLPVPRAKIHSLPEFVKLDPDFANPKWINRHKFMFNFLDINGNGKITLDEIVS
KASDDICAKLDATPEQTKRHQDAVEAFFKKMGMDYGKEVAFPEFIKGWEELAEHDLELWSQNKSTLIREW
GDAVFDIFDKDASGSISLDEWKAYGRISGICPSDEDAEKTFKHCDLDNSGKLDVDEMTRQHLGFWYTLDP
TSDGLYGNFVP*****

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pJNC-COsp-opCLII (6,044 bp)

GTTGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATAT
GGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTG
ACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGT
ATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCCCTATTGACGT
CAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATGACCTTATGGGACTTTCCTACTTGGCAG
TACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGAT
AGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTTTTGGCACCA
AAATCAACGGGACTTTCCAAAATGTCGTAACAACTCCGCCCCATTGACGCAAATGGGCGGTAGGCGTGTA
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GAAGCTGGACCCCGACTTCGCCAACCCCAAGTGGATCAACAGACACAAGTTCATGTTCAACTTCCTGGAC
ATCAACGGCAACGGCAAGATCACCCTGGACGAGATCGTGAGCAAGGCCAGCGACGACATCTGCGCCAAGC
TGGACGCCACCCCCGAGCAGACCAAGAGACACCAGGACGCCGTGGAGGCCTTCTTCAAGAAGATGGGCAT
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GAGCTGTGGAGCCAGAACAAGAGCACCCTGATCAGAGAGTGGGGCGACGCCGTGTTCGACATCTTCGACA
AGGACGCCAGCGGCAGCATCAGCCTGGACGAGTGGAAGGCCTACGGCAGAATCAGCGGCATCTGCCCCAG
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ATGACCAGACAGCACCTGGGCTTCTGGTACACCCTGGACCCCACCAGCGACGGCCTGTACGGCAACTTCG
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CATTCTATTCTGGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATTGGGAAGACAATAGCAGGCATG
CTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGGAAAGAACCAGCTGGGGCTCTAGGGGGTATCCCCA
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TGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGGAG
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ATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGG
CACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTT
TGTCAAGACCGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCC
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GCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGA
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GAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAAGAGCATCAGGGGC
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GCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATT
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GCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTCGTTTGGTATGGCTTCATTCAGC
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ACAACAAGGCAAGGCTTGACCGACAATTGCATGAAGAATCTGCTTAGGGTTAGGCGTTTTGCGCTGCTTC
GCGATGTACGGGCCAGATATACGC

Residue	Sourse	Comments
1-669	1-669	pCMV-JNC backbone
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632-651	632-651	T7 promoter
673-747	1-75	COX signal peptide sequence
769-1,335	97-663	Codon-optimized Clytin II ORF
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3,486-3,616	2,887-3,017	SV40 early polyadenylation signal
3,999-4,672	3,400-4,073	pUC origin
4,817-5,677	4,218-5,078	Ampicillin resistance gene (ORF)

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Cat. No. P-106

Restriction enzyme sites of pJNC-COsp-opCLII

Enzyme Name	Sequence	Count	Cutting Positions
AccI	GT!MKAC	4	724, 3618, 3625, 5813
ApaI	GGGCC!C	1	1362
Asp718I	G!GTACC	1	665
BamHI	G!GATCC	0	-
BclI	T!GATCA	3	1080, 1398, 2488
BglII	A!GATCT	1	5826
EcoRI	G!AATTC	1	764
EcoRV	GAT!ATC	0	-
HincII	GTY!RAC	4	4, 725, 3626, 5814
HindIII	A!AGCTT	1	659
KpnI	GGTAC!C	1	669
MluI	A!CGCGT	0	-
NcoI	C!CATGG	3	380, 2344, 3079
NdeI	CA!TATG	1	254
NheI	G!CTAGC	0	-
NotI	GC!GGCCGC	0	-
PstI	CTGCA!G	1	2700
SacI	GAGCT!C	2	588, 1394
SalI	G!TCGAC	3	723, 3624, 5812
ScaI	AGT!ACT	1	5371
SmaI	CCC!GGG	1	2460
StuI	AGG!CCT	3	959, 1160, 2436
XbaI	T!CTAGA	1	1352
XhoI	C!TCGAG	0	-

Supplier	Contact us
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